

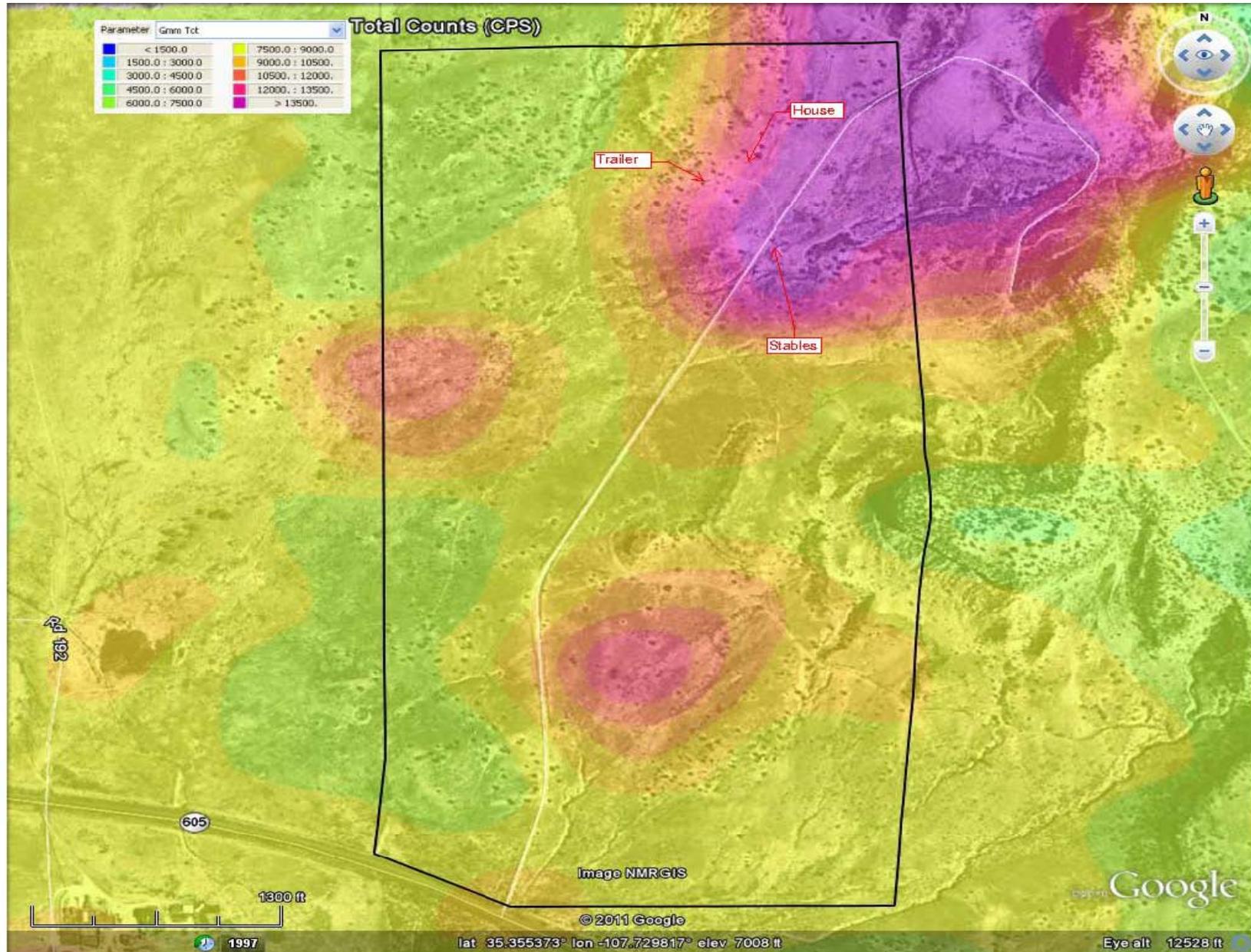


EPA Structure Assessment Project – Johnny M Mine, New Mexico

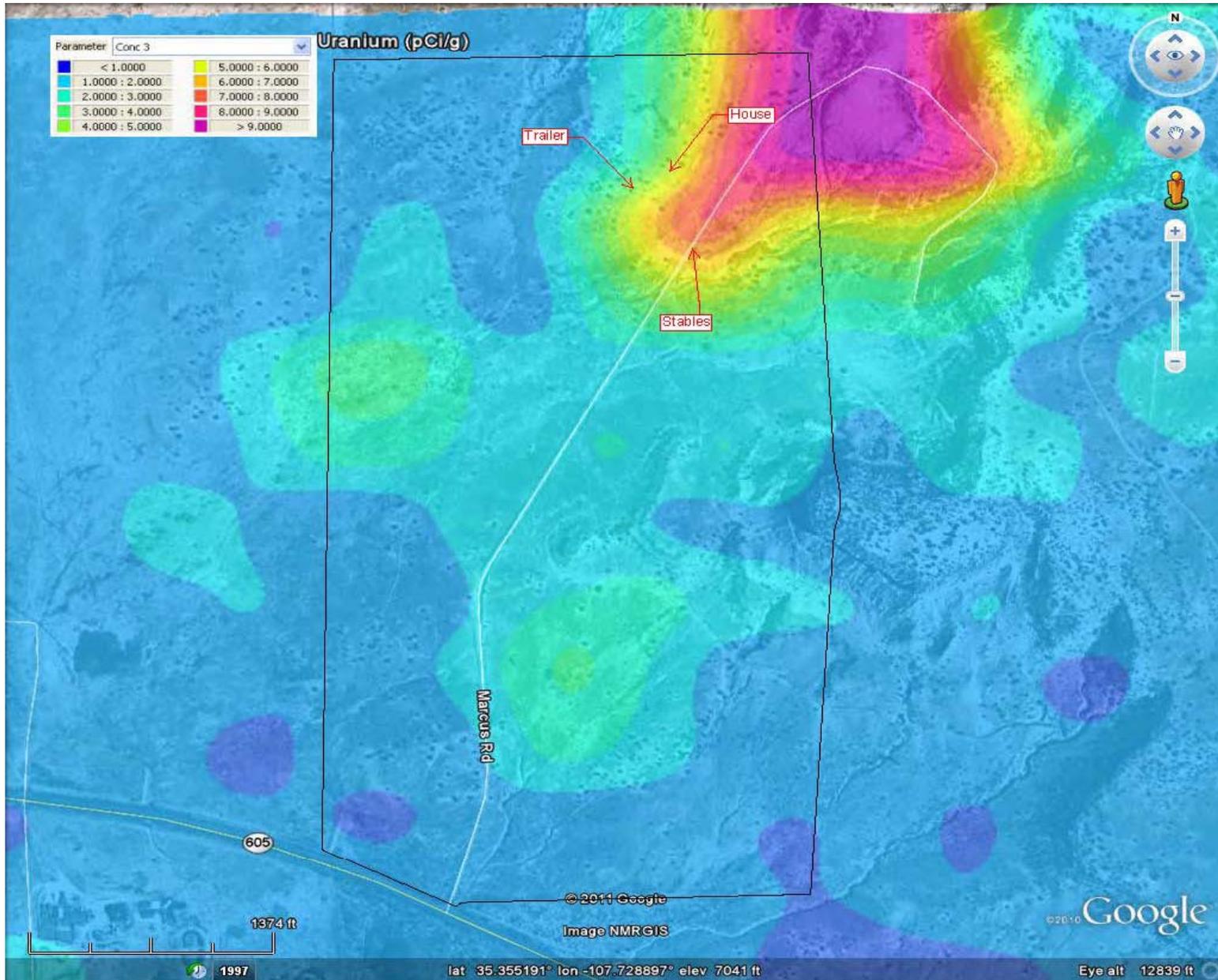
Where we have been - Overview

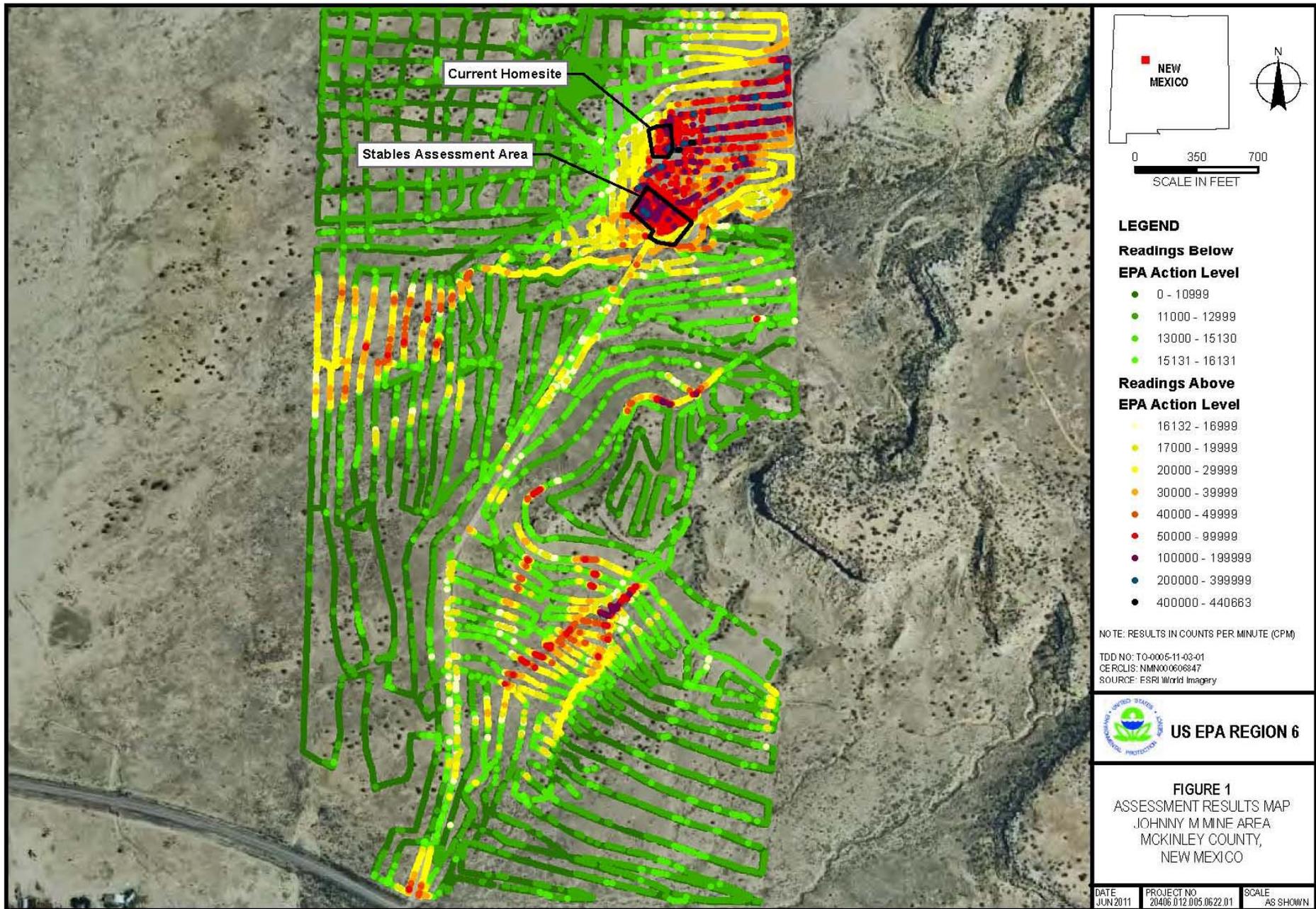
- ASPECT overflights used to establish presence or absence of gross (> 5 times bkgd) widespread radiological contamination in residential study areas.
- ASPECT overflights (+/- 6 acre resolution) detected elevated radiation (2 - 5 times bkgd) in some residential areas, gross radiological contamination was confined to mine or mill areas.
- Detailed data summary maps from the overflights are available for review at the epaosr.net web site.

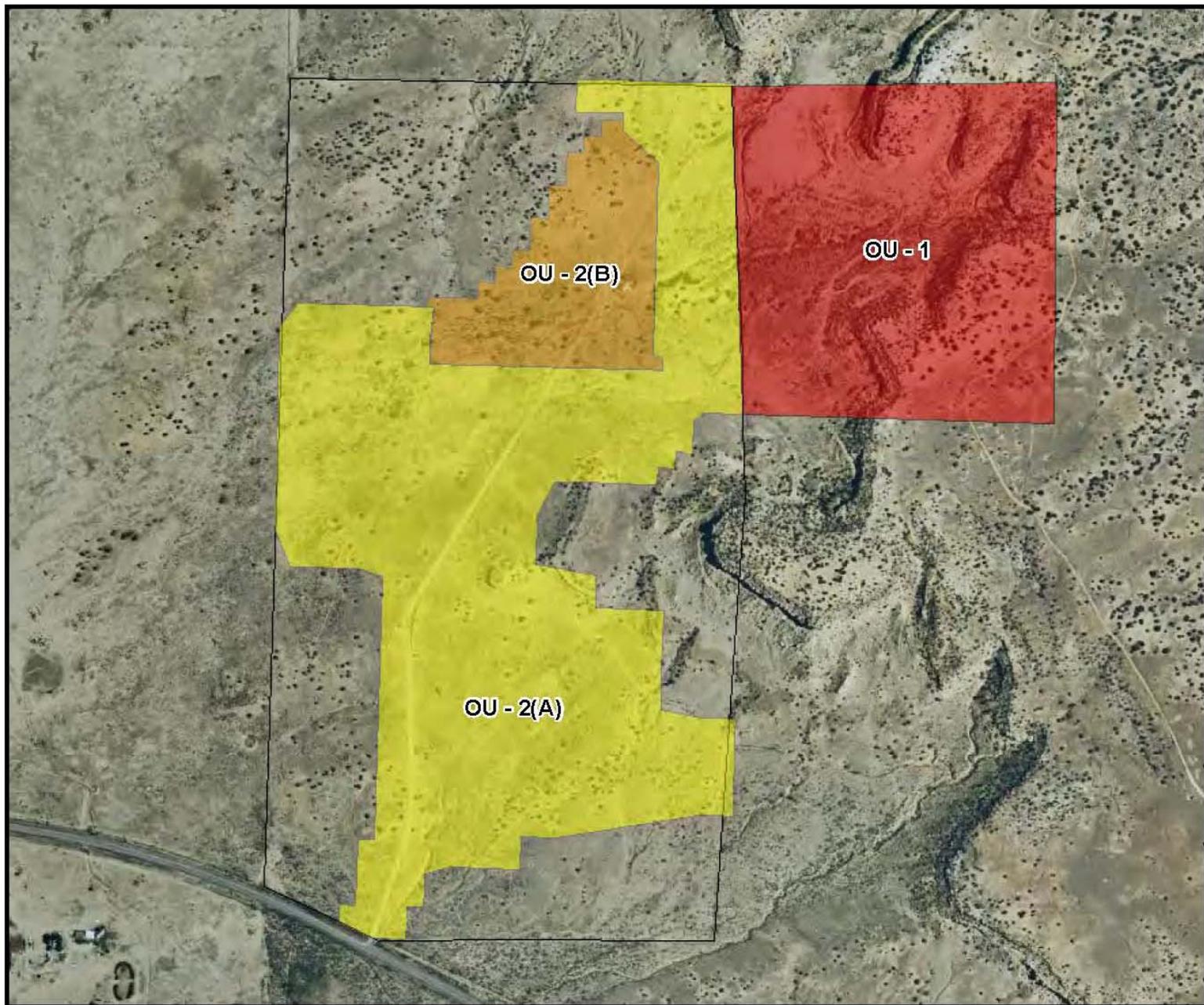
ASPECT Overflight Readings (Counts per Second)



ASPECT Overflight Uranium Concentration (pCi/g)







Legend

JOHNNY M OPERABLE UNIT AREAS

- OU - 1
- OU - 2(A)
- OU - 2(B)



0 400 800
SCALE IN FEET

TDD NO: T0-0005-11-03-01
CERCLIS: NMN00606847
SOURCE: ESRI World Imagery



US EPA REGION 6

FIGURE 3
OPERABLE UNITS MAP
JOHNNY M MINE AREA
McKINLEY COUNTY, NEW MEXICO

DATE MAY 2011	PROJECT NO 20406.012.005.0622.01	SCALE AS SHOWN
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Radon Results (7 & 91 Day)

Homesite Indoor Radon Results (7-Day)				
<i>Sample #</i>	<i>Location</i>	<i>Analyte</i>	<i>Result</i>	<i>Units</i>
SM9000A	Living room	Radon	19.8	pCi/L
SM9000B	Master Bedroom	Radon	19.5	pCi/L
SM9000C	Master Bedroom	Radon	18.6	pCi/L

Homesite Indoor Radon Results (91-day)				
<i>Sample #</i>	<i>Location</i>	<i>Analyte</i>	<i>Result</i>	<i>Units</i>
SM9000-02A	Living Room	Radon	11	pCi/L
SM9000-02B	Master Bedroom	Radon	10.9	pCi/L

Homesite Crawlspace Radon Results (7-day)				
<i>Sample #</i>	<i>Location</i>	<i>Analyte</i>	<i>Result</i>	<i>Units</i>
SM9000D	n/a	Radon	36	pCi/L
SM9000E	n/a	Radon	38	pCi/L

Pressurized Ionization Chamber Results

Homesite PIC Results				
<i>Sample Location</i>	<i>Analyte</i>	<i>Result</i>	<i>Units</i>	<i>Annual Indoor Dose Above Background (Estimated 12 hrs/ day Indoors x 365 days/yr)</i>
Entire House Avg.	Effective Dose Equivalent (Gamma)	0.0389	mR/hr	110.6750 mR/yr
Highest Room Avg.	Effective Dose Equivalent (Gamma)	0.0540	mR/hr	176.6777 mR/yr
Horse Corrals PIC Results				
<i>Sample Location</i>	<i>Analyte</i>	<i>Result</i>	<i>Units</i>	<i>Annual Dose Above Background (Estimated 6 hrs/ day Outdoors x 365 days/yr)</i>
~300' South of Corrals; East side of driveway	Effective Dose Equivalent (Gamma)	0.0148	mR/hr	2.5869 mR/yr
NW of Corral on West side of driveway	Effective Dose Equivalent (Gamma)	0.0452	mR/hr	69.0108 mR/yr
NW of Tack Barn on West side of driveway	Effective Dose Equivalent (Gamma)	0.0321	mR/hr	40.3488 mR/yr
South of Tack Barn on West side of driveway	Effective Dose Equivalent (Gamma)	0.1035	mR/hr	196.8152 mR/yr
Beneath open-air Tack Barn on West side of driveway	Effective Dose Equivalent (Gamma)	0.0604	mR/hr	102.4043 mR/yr
Middle of driveway between western and eastern corrals/ barns	Effective Dose Equivalent (Gamma)	0.0271	mR/hr	29.5756 mR/yr
East of center barn on East side of driveway	Effective Dose Equivalent (Gamma)	0.0171	mR/hr	7.6341 mR/yr
South of SW corner of SW corral on east side of driveway	Effective Dose Equivalent (Gamma)	0.0252	mR/hr	25.2909 mR/yr
North of NE corner of NE corral on east side of driveway	Effective Dose Equivalent (Gamma)	0.0489	mR/hr	77.3906 mR/yr
SE corner, inside barn on east side of driveway	Effective Dose Equivalent (Gamma)	0.0323	mR/hr	40.7984 mR/yr

OU-2B Radium-226 Results

- The homesite surface (<15cm) results range from 0.975 – 80.1 pCi/g.
- The homesite depth (>15cm) results range from 0.662 – 241 pCi/g.
- The corrals area surface (<15cm) results range from 14.3 – 182 pCi/g.
- The corrals area depth (>15cm) results range from 6.58 – 9.17 pCi/g.

OU-2A Radium-226 Results

- The OU-2A surface (<15cm) results range from 3.34 – 118 pCi/g.
- The OU-2A depth (>15cm) results range from 1.26 – 370 pCi/g.

OU-2B Isotopic Thorium Results

- The homesite surface (<15cm) results range from 0.632 – 76.4 pCi/g.
- The homesite depth (>15cm) results range from 0.602 – 159.4 pCi/g.
- The corrals area surface (<15cm) results range from 0.381 – 83.7 pCi/g.
- The corrals area depth (>15cm) results range from 2.154 – 8.0 pCi/g.

OU-2A Isotopic Thorium Results

- The OU-2A surface (<15cm) results range from 1.249 – 68.970 pCi/g.
- The OU-2A depth (>15cm) results range from 0.638 – 52.090 pCi/g.

OU-2B Isotopic Uranium Results

- The homesite surface (<15cm) results range from 0.120 – 27.9 pCi/g.
- The homesite depth (>15cm) results range from 0.061 – 162.3 pCi/g.
- The corrals area surface (<15cm) results range from 0.0513 – 96.2 pCi/g.
- The corrals area depth (>15cm) results range from 0.984 – 28.260 pCi/g.

OU-2A Isotopic Uranium Results

- The OU-2A surface (<15cm) results range from 0.123 – 41.340 pCi/g.
- The OU-2A depth (>15cm) results range from 0.00 – 63.670 pCi/g.

Annual Dose Estimate

See Aerial Photo from 1981

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